

Zhenhai Yu

List of Publications by Year in descending order

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62
papers

1,855
citations

331670

21
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276875

41
g-index

63
all docs

63
docs citations

63
times ranked

2818
citing authors

#	ARTICLE	IF	CITATIONS
1	High-pressure synthesis of nanomaterials with exotic phases. , 2022, , .		0
2	Large magnetoresistance and unexpected low thermal conductivity in topological semimetal CrP ₄ single crystal. Applied Physics A: Materials Science and Processing, 2022, 128, 1.	2.3	3
3	Pressured-induced superconducting phase with large upper critical field and concomitant enhancement of antiferromagnetic transition in EuTe ₂ . Nature Communications, 2022, 13, .	12.8	11
4	The Remarkable Anisotropic Compressibility and Metallic Cr ₂ Cr Chains in Topological Semimetal CrP ₄ under High Pressure. Physica Status Solidi (B): Basic Research, 2021, 258, 2000544.	1.5	2
5	Superconductivity in chromium nitrides Pr ₃ Cr _{10-x} N ₁₁ with strong electron correlations. National Science Review, 2020, 7, 21-26.	9.5	12
6	Pressure-induced band-gap closure and metallization in two-dimensional transition metal halide CdI ₂ . Applied Materials Today, 2020, 18, 100532.	4.3	9
7	Raman spectroscopy and lattice dynamical stability study of 2D ferromagnetic semiconductor Cr ₂ Ge ₂ Te ₆ under high pressure. Journal of Alloys and Compounds, 2020, 819, 153368.	5.5	14
8	High-Pressure Crystal Growth, Superconducting Properties, and Electronic Band Structure of Nb ₂ P ₅ . Chemistry of Materials, 2020, 32, 8781-8788.	6.7	17
9	Magnetic critical behavior of the van der Waals Fe ₅ GeTe ₂ crystal with near room temperature ferromagnetism. Scientific Reports, 2020, 10, 15345.	3.3	35
10	Coupled magnetic and structural phase transitions in the antiferromagnetic polar metal PbO_6 under pressure. Physical Review B, 2020, 102, .	3.2	5
11	Unique 2D \rightarrow 3D Structure Transformations in Trichalcogenide CrSiTe ₃ under High Pressure. Journal of Physical Chemistry C, 2020, 124, 15600-15606.	3.1	15
12	Pressure-induced superconductivity and topological phase transitions in the topological nodal-line semimetal SrAs ₃ . Npj Quantum Materials, 2020, 5, .	5.2	27
13	Bandgap widening by pressure-induced disorder in two-dimensional lead halide perovskite. Applied Physics Letters, 2020, 116, 101901.	3.3	12
14	Magnetic exchange induced Weyl state in a semimetal EuCd ₂ Sb ₂ . APL Materials, 2020, 8, .	5.1	37
15	Pressure-Induced Dimerization of C ₆₀ at Room Temperature as Revealed by an In Situ Spectroscopy Study Using an Infrared Laser. Crystals, 2020, 10, 182.	2.2	4
16	Pressure-Induced Two-Color Photoluminescence and Phase Transition of Two-Dimensional Layered MnCl ₂ . Journal of Physical Chemistry C, 2020, 124, 23317-23323.	3.1	6
17	Magnetotransport and <i>ab initio</i> calculation studies on the layered semimetal CaAl_2S_3 hosting multiple nontrivial topological states. Physical Review B, 2020, 101, .	3.2	7
18	Understanding CrGeTe ₃ : an abnormal phase change material with inverse resistance and density contrast. Journal of Materials Chemistry C, 2019, 7, 9025-9030.	5.5	28

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19	Robust magnetoresistance in TaAs ₂ under pressure up to about 37 GPa. Applied Physics Letters, 2019, 115, 122403.	3.3	5
20	Quantum oscillations and nontrivial topological state in a compensated semimetal TaP . Physical Review B, 2019, 100, .	3.2	5
21	Pressure-Induced Structural Phase Transition and a Special Amorphization Phase of Two-Dimensional Ferromagnetic Semiconductor $\text{Cr}_2\text{Ge}_2\text{Te}_6$. Journal of Physical Chemistry C, 2019, 123, 13885-13891.	3.1	35
22	Recent progress on high-pressure and high-temperature studies of fullerenes and related materials. Matter and Radiation at Extremes, 2019, 4, .	3.9	34
23	The experimental compression behavior of platinum hydride to 128 GPa. Materials Letters, 2019, 249, 84-86.	2.6	5
24	Stoichiometric evolutions of PH ₃ under high pressure: implication for high- <i>T_c</i> superconducting hydrides. National Science Review, 2019, 6, 524-531.	9.5	28
25	Superconductivity at 4.6 K in the Cr-based nitride $\text{La}_3\text{Cr}_{10}\text{N}_{11}$. Europhysics Letters, 2019, 128, 67002.	2.0	2
26	Pressure-induced electronic anomaly and multiband superconductivity in the doped topological insulator $\text{N}_x\text{Bi}_2\text{Te}_3$. Physical Review B, 2019, 100, .	3.2	7
27	Li-ion battery material under high pressure: amorphization and enhanced conductivity of $\text{Li}_4\text{Ti}_5\text{O}_{12}$. National Science Review, 2019, 6, 239-246.	9.5	49
28	Size-dependent phase transition of Er_2O_3 under high pressure. Applied Physics Letters, 2018, 112, 143102.	3.3	10
29	Solids, liquids, and gases under high pressure. Reviews of Modern Physics, 2018, 90, .	45.6	337
30	Pressure-induced isostructural phase transition and charge transfer in superconducting FeSe. Journal of Alloys and Compounds, 2018, 767, 811-819.	5.5	19
31	Pressure-induced structural and semiconductor-semiconductor transitions in $\text{C}_x\text{O}_{0.5}\text{Mg}_2\text{S}$. Physical Review B, 2018, 98, 040401.	3.2	20
32	Unexpected Semimetallic BiS_2 at High Pressure and High Temperature. Journal of Physical Chemistry Letters, 2018, 9, 5785-5791.	4.6	12
33	X-ray diffraction and spectroscopy study of nano- Eu_2O_3 structural transformation under high pressure. Journal of Alloys and Compounds, 2017, 701, 542-548.	5.5	18
34	Structural phase transitions of $(\text{Bi}_x\text{Sb}_{1-x})_2(\text{Te}_y\text{Se}_{3-y})_3$ compounds under high pressure and the influence of the atomic radius on the compression processes of tetradymites. Physical Chemistry Chemical Physics, 2017, 19, 2207-2216.	2.8	18
35	Pressure-induced structural transitions of a room temperature ionic liquid $1\text{-ethyl-3-methylimidazolium chloride}$. Journal of Chemical Physics, 2017, 146, .	3.0	16
36	Structural evolution behavior of manganese monophosphide under high pressure: experimental and theoretical study. Journal of Physics Condensed Matter, 2017, 29, 254002.	1.8	4

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37	Impact of Pressure on the Resonant Bonding in Chalcogenides. <i>Journal of Physical Chemistry C</i> , 2017, 121, 25447-25454.	3.1	25
38	Quasi 3D polymerization in C60 bilayers in a fullerene solvate. <i>Carbon</i> , 2017, 124, 499-505.	10.3	23
39	Pressure-Induced Crystallization and Phase Transformation of Para-xylene. <i>Scientific Reports</i> , 2017, 7, 5321.	3.3	18
40	Lattice dynamics in monolayer and few-layer SnSe2. <i>Physical Review B</i> , 2017, 96, .	3.2	22
41	Photoluminescence and phase transition in Er2O3 under high pressure. <i>Journal of Alloys and Compounds</i> , 2017, 725, 941-945.	5.5	19
42	Pressure-induced phase transitions of exposed curved surface nano-TiO2 with high photocatalytic activity. <i>Journal of Applied Physics</i> , 2016, 119, .	2.5	14
43	Correlated structural and electronic phase transformations in transition metal chalcogenide under high pressure. <i>Journal of Applied Physics</i> , 2016, 119, .	2.5	5
44	Structural Phase Transitions and Metallized Phenomena in Arsenic Telluride under High Pressure. <i>Inorganic Chemistry</i> , 2016, 55, 3907-3914.	4.0	17
45	Phase transformation and fluorescent enhancement of ErF3 at high pressure. <i>Solid State Communications</i> , 2016, 242, 30-35.	1.9	6
46	High-pressure synchrotron Mössbauer and X-ray diffraction studies: Exploring the structure-related valence fluctuation in EuNi2P2. <i>Physica B: Condensed Matter</i> , 2016, 501, 101-105.	2.7	4
47	Crystal structure and transporting properties of Bi2S3 under high pressure: Experimental and theoretical studies. <i>Journal of Alloys and Compounds</i> , 2016, 688, 329-335.	5.5	36
48	The behaviors of anatase and TiO2(B) phase coexisting nanosheets under high pressure. <i>Radiation Physics and Chemistry</i> , 2016, 120, 1-6.	2.8	13
49	Structural phase transitions in Bi2Se3 under high pressure. <i>Scientific Reports</i> , 2015, 5, 15939.	3.3	56
50	Reversing the Resistivity Contrast in the Phase-Change Memory Material GeSb ₂ Te ₄ Using High Pressure. <i>Advanced Electronic Materials</i> , 2015, 1, 1500240.	5.1	19
51	Isostructural Phase Transition in Bismuth Oxide Chloride Induced by Redistribution of Charge under High Pressure. <i>Journal of Physical Chemistry C</i> , 2015, 119, 27657-27665.	3.1	24
52	Anomalous anisotropic compression behavior of superconducting CrAs under high pressure. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 14766-14770.	7.1	13
53	Solvated fullerenes, a new class of carbon materials suitable for high-pressure studies: A review. <i>Journal of Physics and Chemistry of Solids</i> , 2015, 84, 85-95.	4.0	35
54	Pressure-Induced Phase Transformation, Reversible Amorphization, and Anomalous Visible Light Response in Organolead Bromide Perovskite. <i>Journal of the American Chemical Society</i> , 2015, 137, 11144-11149.	13.7	303

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55	Conventional empirical law reverses in the phase transitions of 122-type iron-based superconductors. <i>Scientific Reports</i> , 2014, 4, 7172.	3.3	16
56	Pressure-Induced Amorphization in Single-Crystal Ta ₂ O ₅ Nanowires: A Kinetic Mechanism and Improved Electrical Conductivity. <i>Journal of the American Chemical Society</i> , 2013, 135, 13947-13953.	13.7	70
57	<i>In situ</i> high-pressure synchrotron X-ray diffraction study of the structural stability in the intermetallic compound Mn ₂ Sb. <i>Physica Status Solidi (B): Basic Research</i> , 2012, 249, 2239-2243.	1.5	3
58	High pressure powder X-ray diffraction study of Cr ₂ As and pressure-induced structural phase transition. <i>Solid State Communications</i> , 2012, 152, 509-512.	1.9	9
59	Pressure-Induced Isostructural Phase Transition and Correlation of FeAs Coordination with the Superconducting Properties of 111-Type Na _{1-x} FeAs. <i>Journal of the American Chemical Society</i> , 2011, 133, 7892-7896.	13.7	55
60	Size-Dependent Amorphization of Nanoscale Y_2O_3 at High Pressure. <i>Physical Review Letters</i> , 2010, 105, 095701.	7.8	100
61	High-pressure induced phase transitions of Y ₂ O ₃ and Y ₂ O ₃ :Eu ³⁺ . <i>Applied Physics Letters</i> , 2009, 94, .	3.3	74
62	Dehydro-Diels-Alder reaction and diamondization of bowl-shaped clusters C ₁₈ Te ₃ Br ₄ (Bu-O) ₆ . <i>Nano Research</i> , 0, , 1.	10.4	2